

was fought betwixt the *Saxons* and the *Danes*; in which so much Blood was spilt, that a little River is said to have run Blood, now called from thence *Danes Stream*.

Your Friend, and

Oxenden-Street, Jan. 12.
1744.

Humble Servant,

Tho. Wright.

XI. Observations on a Case published in the last Volume of the Medical Essays, &c. of Recovering a Man Dead in Appearance, by distending the Lungs with Air. Printed at Edinburgh, 1744; by John Fothergill, Licent. Coll. Med. Lond.

*Read Feb. 21.
1744-5. Now
printed with
Additions.*

THERE are some Facts, which, in themselves, are of so great Importance to Mankind, or which may lead to such useful Discoveries, that it would seem to be the Duty of every one, under whose Notice they fall, to render them as extensively public as it is possible.

The Case which gives Rise to the following Remarks, I apprehend, is of this Nature: It is an Account of "*A Man, dead in Appearance, recovered by distending the Lungs with Air; by Mr. William Tossack, Surgeon in Alloa;*" printed in Part 2. p. 605. Vol. V. of the *Medical Essays*, published by a Society of Gentlemen at *Edinburgh*; an Abstract of which will

will be sufficient in this Place: Those who desire an ampler Account may consult the Article itself.

A Person suffocated by the *nauseous Steam* arising from Coals set on Fire in the Pit, fell down as dead; he lay in the Pit *between half an Hour and three Quarters*; and was then dragg'd up; his Eyes staring and open, his Mouth gaping wide, his Skin cold; not the least Pulse in either Heart or Arteries, and not the least Breathing to be observed.

In these Circumstances, the Surgeon, who relates the Affair, applied his Mouth close to the Patient's, and, by blowing strongly, holding the Nostrils at the same time, raised his Chest fully by his Breath. The Surgeon immediately felt six or seven very quick Beats of the Heart; the Thorax continued to play, and the Pulse was soon after felt in the Arteries. He then opened a Vein in his Arm; which, after giving a small Jet, sent out the Blood in Drops only for a Quarter of an Hour, and then bled freely. In the mean time he caused him to be pull'd, push'd, and rubb'd, as much as he could. In one Hour the Patient began to come to himself; within four Hours he walked home; and in as many Days returned to his Work.

There were many Hundred People, some of them of Distinction, present at the Time.

This is the Substance of the Account; from whence it naturally appears how much ought to be attributed to the Sagacity of the Surgeon in the Recovery of this Person. Anatomists, it is true, have long known, that an artificial Inflation of the Lungs of a dead or dying Animal will put the Heart in Motion, and continue it so for some time; yet this is the first Instance

Instance I remember to have met with, wherein the Experiment was applied to the happy Purpose of rescuing Life from such imminent Danger.

Bleeding has hitherto been almost the only Refuge upon these Occasions : If this did not succeed, the Patient was given up. By Bleeding, it was proposed to give Vent to the stagnating Blood in the Vein, in order to make Way for that in the Arteries *à tergo*, that the Resistance of the Heart being thus diminished, this Muscle might again be put in Motion.

But, in too many Instances, we every Day are informed, that this Operation will not succeed, tho' the Aperture is made with never so much Skill : Nor is it likely, that it should, when the Blood has lost considerably of its Fluidity, the Motion of the Heart, and the contractile Force of the Solids, are at an End.

Chafing, Rubbing, Pulling, the Application of Stimulants, are too often as ineffectual as Bleeding.

The Method of distending the Lungs of Persons, dead in Appearance, having been try'd with such Success in one Instance, gives just Reason to expect, that it may be useful to others.

It may be a proper Inquiry, In what Cases, and under what Circumstances, there may be a Prospect of applying it with Success ?

It will at once be granted, That when the Juices are corrupted, where they are rendered unfit for Circulation by Diseases, where they are exhausted, or where the Tone and Texture of the Solids is injured or destroyed, it would be extreme Folly to think of any Expedient to recover Life.

But where the Solids are whole, and their Tone unimpair'd by Diseases, the Juices not vitiated by any

any other Cause than a short Stagnation; where there is the least Remains of animal Heat, it would seem wrong not to attempt so easy an Experiment.

This Description takes in a few Diseases, but a greater Number of Accidents. Amongst the first are many of those which are called sudden Deaths from some invisible Cause; Apoplexies, Fits of various Kinds, as Hysterics, *Syncope's*, and many other Disorders, wherein, without any obvious Præ-indisposition, Persons in a Moment sink down and expire. In many of these Cases it might be of Use to apply this Method; yet without neglecting any of those other Helps, which are usually called in upon these melancholy Occasions.

It is not easy to enumerate all the various Casualties, in which this Method might be try'd not without a Prospect of Success; some of them are the following: Suffocations from the sulphureous Damps of Mines, Coal-pits, &c. the condensed Air of long-unopen'd Wells, or other subterraneous Caverns; the noxious Vapours arising from fermenting Liquors received from a narrow Vent; the Steam of burning Charcoal; sulphureous mineral Acids; arsenical *Effluvia*, &c.

Perhaps those, who, to Appearance, are struck dead by Lightning, or any violent Agitation of the Passions, as Joy, Fear, Surprize, &c. might frequently be recover'd by this simple Process of strongly blowing into the Lungs, and by that means once more communicating Motion to the vital Organs.

Malefactors executed at the Gallows would afford Opportunities of discovering how far this Method might be successful in relieving such as may have unhappily

unhappily become their own Executioners, by hanging themselves. It might at least be try'd, if, after the Criminals have hung the usual Time, inflating the Lungs, in the Manner proposed, would not, sometimes, bring them to Life. The only ill Consequence that could accrue from a Discovery of this kind would be easily obviated by prolonging the present allotted Time of Suspension.

But this Method would seem to promise very much in assisting those who have been suffocated in the Water, under the above mentioned Circumstances; at least it appears necessary to recommend a Trial of it, after the Body has been discharged of the Water admitted into it, by placing it in a proper Position, the Head downwards, prone, and, if it can be, across a Barrel, Hogshead, or some such-like convex Support, with the utmost Expedition.

It does not seem absurd, to compare the animal Machine to a Clock; let the Wheels whereof be in never so good Order, the Mechanism complete in every Part, and wound up to the full Pitch, yet, without some Impulse communicated to the *Pendulum*, the Whole continues motionless.

Thus, in the Accidents described, the Solids are supposed to be whole and elastic, the Juices in sufficient Quantities, their Qualities no otherwise vitiated than by a short Stagnation, from the Quiescence of that *moving Something* which enables Matter in animated Bodies to overcome the Resistance of the *Medium* it acts in.

Inflating the Lungs, and, by this means, communicating Motion to the Heart, like giving the first Vibration to a *Pendulum*, may possibly, in many

Cases, enable this *Something* to resume the Government of the Fabric; and actuate its Organs afresh, till another unavoidable Necessity puts a Stop to it entirely.

It has been suggested to me by some of my Acquaintance, that a Pair of Bellows might possibly be applied with more Advantage in these Cases, than the Blast of a Man's Mouth; but, if any Person can be got to try the charitable Experiment by blowing, it would seem preferable to the other: *1st.* As the Bellows may not be at hand: *2dly.* As the Lungs of one Man may bear, without Injury, as great a Force as those of another Man can exert; which by the Bellows cannot always be determin'd: *3dly.* The Warmth and Moisture of the Breath would be more likely to promote the Circulation, than the chilling Air forced out of a Pair of Bellows.

To conclude, as I apprehend, the Method above described may conduce to the saving a great many Lives, as it is practicable by every one who happens to be present at the Accident, without Loss of Time, without Expence, with little Trouble, and less Skill, and as it is, perhaps, the only Expedient of which it can be justly said, that it may possibly do *great Good*, but cannot do Harm, I thought it of so much Consequence to the Public, as to deserve to be recommended in this Manner to your Notice: For tho' it is already published in a Work which is generally read by the Faculty; yet, perhaps, it may be overlooked by some, forgot by others, and perhaps, after all the Care that can be taken, it may never come

to the Knowledge of a Tenth of those who ought not to be ignorant of it.

John Fothergill.

P. S. As the Representation of an extraordinary Fact may perhaps induce some to try the Experiment, when Occasions like those which are specified in the above Remarks occur, it is hoped, that Humanity will prompt all such to favour the Public with an Account of their Success, with the principal Circumstances that attended. And as the Writer of these Remarks has embarked in the Design of rendering this Fact diffusively known, he would be glad to have it in his Power to inform the Public, that numerous Experiments confirm what this Case suggests; *viz.* the Possibility of saving a great many Lives, without risking anything.

White-Hart Court, Gracious-Street;
7ber, 1744.